

REMARKS

Upon entry of this amendment, claims 1, 2 and 9 will be amended, and claims 15-28 will be added, with claims 1, 2, 9, 12, 21, and 25 being independent claims. Claims 1-28 are pending, with claims 1-8 and 15-28 being under consideration, and claims 9-14 being withdrawn from consideration.

Applicants respectfully submit that the amendments to the claims are supported by the originally filed application. For example, the Examiner's attention is directed to page 2, lines 6-7, and the description of proteins beginning at the top of page 6, which description is directed to intracellular organelle proteins and proteins that one having ordinary skill in the art would understand to be non-receptor proteins. Accordingly, the amendment to the claims do not include new matter.

Moreover, the specification is amended herein, at page 5 and page 8, to explicitly indicate the implicitly included language included in the claims.

Reconsideration and allowance of the application are respectfully requested.

DISCUSSION OF TELEPHONE INTERVIEW

Applicants thank the Examiner for conducting a telephonic interview on March 31, 2004 to discuss the Office Action. During the interview, Applicants discussed possible amendments to claim 1 to overcome the 35 U.S.C. § 112, second paragraph rejection. It was agreed that amending claim 1 to recovering a budded baculovirus would overcome the rejection.

INFORMATION DISCLOSURE STATEMENT

Applicants are filing herewith a Second Supplemental Information Disclosure Statement. The Examiner is respectfully requested to consider the information cited therein, and to forward an initialed copy of the Form PTO-1449 submitted therewith with the next communication from the Patent and Trademark Office.

RESPONSE TO MAINTAINING OF RESTRICTION REQUIREMENT

Applicants thank the Examiner for withdrawing the restriction between the various proteins listed in the claims. The Office Action has maintained the Restriction Requirement of groups II-VI and claims 9-14 remain withdrawn from consideration as being directed to non-elected inventions. Applicants once again respectfully submit that for the reasons previously submitted in the Election with Traverse filed November 4, 2002, the restriction requirement should be reconsidered and withdrawn. Specifically, there would not be a serious burden on the Examiner to examine all of the groups as they are related to each other. In any event, whether or not the requirement is withdrawn, upon allowance of the elected claims, the Examiner is respectfully requested to rejoin the non-elected claims with the allowed elected claims.

In view of the above, reconsideration and withdrawal of the restriction requirement or rejoinder of the non-elected invention are respectfully requested.

RESPONSE TO REJECTIONS BASED UPON INDEFINITENESS

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Claims 1-8 have been rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Office Action asserts that claim 1 is drawn to a method for preparing a protein, but does not contain any method steps to prepare the protein.

In response, Applicants have amended claim 1 to more clearly set out the invention. Specifically, Applicants have changed the term “preparing” to “recovering a budded baculovirus expressing.” Support for this change is found at page 10 of the specification. During the telephone interview on March 31, 2004, the Examiner indicated that such an amendment would overcome the rejection. Applicants therefore, respectfully submit that this amendment moots the rejection, and request the rejection be withdrawn.

The Office Action also asserts that it can not be determined what a “substrate of the membrane-bound enzyme,” a “membrane-bound enzyme activator” or a “protein involved in formation of high dimensional structure of a protein” is. Finally, the Office Action asserts that it is not clear what is encompassed by the term “protein involved in antigen presentation.”

In response, Applicants respectfully direct the Examiner’s attention to pages 6-8 of the specification which defines the allegedly unclear terms, and give examples of each. In light of these teachings, Applicants respectfully submit that the rejection is without basis, and should be withdrawn.

For these reasons, the rejections of claims 1-8 under 35 U.S.C. § 112, second paragraph should be withdrawn.

RESPONSE TO REJECTIONS BASED UPON PRIOR ART

The Office Action maintained the rejection of claims 1-8 under 35 U.S.C. 102(b) as being clearly anticipated by Loisel et al. (hereinafter "Loisel"), Nature Biotechnology, November 1997, 15, 1300-1304. The Office Action asserts that Loisel teaches the preparation of functional β_2 -adrenergic receptors by infecting insect Sf9 cells with recombinant baculovirus, expressing the receptor from budded baculovirus, separating the budded virus and recovering the receptors. The Office Action asserts that this teaching anticipates the claimed invention.

In response, Applicants have amended claims 1 and 2 to more clearly define the subject matter of the claimed invention. Specifically, Applicants have amended claims 1 and 2 to reflect that the protein recovered, or prepared, is an intracellular organelle membrane-bound protein. The β_2 -adrenergic receptors disclosed in Loisel are cell membrane-bound receptor proteins, and finding it expressed on budded baculoviruses was not unexpected. In contrast, the discovery that intracellular organelle membrane-bound proteins are expressed and can be recovered and prepared from budded baculoviruses was unexpected. Loisel does not teach or suggest that intracellular organelle membrane-bound proteins can be found, or are expected to be found expressed on budded baculoviruses.

Loisel does not teach all of the limitations of claims 1-8 and therefore, can not anticipate Applicants claimed invention. Therefore, Applicants respectfully request that the Examiner reconsider and withdraw the rejection of claims 1-8 as anticipated by Loisel.

In view of the above, the rejections of record are without appropriate basis, and should be withdrawn.

Applicants further respectfully submit that Loisel does not teach or suggest the classes of proteins, or the proteins themselves of newly added claims 15-28.

Claims 1-8 have also been rejected under 35 U.S.C. 103(a) as being unpatentable over Possee (Current Opinion in Biotechnology, 1997) (hereinafter, "Possee"), and either Grabherr et al. (Biotechniques, 1997) (hereinafter, "Grabherr") or Boublik et al. (Biotechnology, 1995) (hereinafter, "Boublik"). The Office Action asserts that Grabherr teaches the expression of HIV-1 gp41 envelope protein on budded baculoviruses. The Office Action also asserts that Boublik teaches the infection of insect cells with a recombinant baculovirus expressing HIV-1 gp120. The Office Action asserts that even though neither Boublik nor Grabherr teach the instantly claimed proteins, one of ordinary skill in the art would have been motivated to express and purify any class of proteins from the surface of a baculovirus to produce complex structures and/or native conformational mammalian proteins.

In response, Applicants note that the proteins disclosed in both Boublik and Grabherr are cell membrane-associated proteins. Neither Boublik nor Grabherr teach or suggest that intracellular organelle membrane-bound proteins would be expressed on the surface of baculovirus, much less that they could be recovered and/or prepared from budded baculoviruses. As noted above, this result is totally unexpected, and not taught or suggested by any of the prior art cited in the Office Action. For this reason, Applicants respectfully request that the Examiner reconsider and withdraw the rejection of claims 1-8 under 35 U.S.C. § 103(a).

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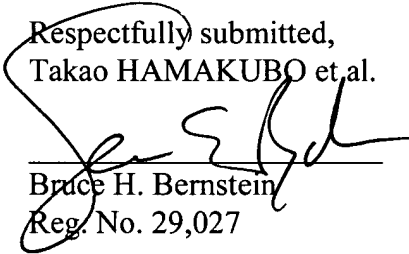
CONCLUSION

In view of the foregoing, the Examiner is respectfully requested to reconsider and withdraw the rejection of record, and allow all the pending claims.

Allowance of the application is requested, with an early mailing of the Notices of Allowance and Allowability.

If the Examiner has any questions or wish to further discuss this application, the Examiner is invited to telephone the undersigned at the below-listed telephone number.

Respectfully submitted,
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